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(19) (CA) **CANADIAN PATENT** (12)

(54) Protective Sheet, in Particular for a Foundation Wall  
or a Floor on the Ground

(72) Bergsland, Jon,  
Norway

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The present invention relates to a protective sheet, in particular for a foundation wall or a floor on the ground, comprising a substantially planar sheet or suitable, relatively stiff material, e.g. plastics, where one side of the sheet has a large number of spaced protrusions constituted by knobs made by forming, whereby the other side of the sheet thereby obtains a corresponding number of recesses provided by said forming. Such a sheet is known, for example, from DE-A-2640665 and DE-A-3006820. GB 1553314

10 The known so-called foundation wall sheets are presently used extensively as a covering of the foundation wall before fill masses are placed thereat. Where access to draining fill masses is poor, it is frequently an expressed wish to ensure that the water pressure against the foundation wall becomes the least possible. Such additional drainage is not always that easy to provide by means of the known foundation wall sheets having knobs. Further, it may in certain cases be desirable to provide the foundation wall sheet with knobs which do not quite so easily yield due to external forces

20 from e.g. the fill mass. Recently it has also been common to use these foundation wall sheets as a diffusion bar for a floor on the ground. With the prior art solutions, it is, however necessary to provide spacing means to space the floor from the moisture bar, in order to provide sufficient ventilation or drainage under the floor. This is particularly important in the cases where a floor made e.g. from chip boards is used.

30 Thus, the present invention has as an object to provide a protective sheet providing a solution to the indicated drawbacks. The present invention provides a protective sheet, in particular for a foundation wall or a floor on the ground, comprising a substantially planar sheet of suitable, relatively stiff plastic material, one side of the sheet having a large number of spaced protrusions constituted by knobs provided by forming, the other side of the sheet thereby obtaining a

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corresponding number of recesses provided by the forming, characterized in that the knobs have a reversely directed centrally disposed crater-like portion of truncated conical form, the widest end of which is integral with the upper portion of the knob and the narrowest end of which is substantially flush with the other side of the sheet.

In a preferred embodiment open channels are provided for drainage of filtrated water. A corresponding rib is formed on one side of the sheet with a height less than the height of the knobs, characterized in that each of the open channels extends between and has respective ends opening into the recesses of adjacent knobs.

Further features of the invention will appear from the subsequent description with reference to the attached drawings.

Fig.1 is a section of a protective sheet according to the invention.

Fig.2 is the cross-section II-II in Fig.1.

Fig.3 is the cross-section of Fig.2 related to a filtrating canvas.

Fig.4 illustrates the use of the protective sheet in a manner known per se.

Fig.5 illustrates the use of the protective sheet in connection with a filtrating canvas.

Fig.6 illustrates the use of the protective sheet as a moist bar for a floor on the ground.

In Fig.1 there is shown a protective sheet, e.g. of relatively stiff plastics which may possibly before use be present in a rolled-up form. As indicated in Fig.2, knobs 2 protrude from the one side 1A of the sheet, said knobs having a centrally arranged crater-like portion 3 and where the bottom of the crater 3A is flush with the other side 1B of the sheet. Between the recesses 2A provided by the forming of the knobs 2, there is on the other side 1B of the sheet provided an open channel 4. On said one side 1A of the sheet there is thus a

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corresponding rib or ridge. The said channels 4 will, as regards a vertically disposed protective sheet, extend between adjacent recesses 2A being arranged vertically above each other.

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However, there is nothing against the knobs being arranged in a different manner than that illustrated in Fig. 1. Thus, the knobs of one row of knobs could be shifted relative to the knobs in the adjacent rows of knobs.

- 5           In the cases where the protective sheet is to be arranged in an environment having masses providing poor drainage, it may be an advantage to arrange a filtrating canvas 5 on the said other side 1B of the sheet.

- 10           In Fig. 4 there is shown a first mode of use for the protective sheet 1, where it is arranged in a traditional manner with the knobs facing a foundation wall 7. Fill mass 6, e.g. broken stone or other mass having good drainage property is placed against the other side of the sheet. This draining mass may cause a substantial pressure against  
15           the sheet, wherefore the crater-like portion of the knob will effect a stiffening of the knob itself and ensure the necessary distance between the protective sheet and the foundation wall. The channel 4 will in addition effect further drainage along the other side 1B of the sheet,  
20           wherefore the water pressure against the sheet is reduced.

- In Fig. 5, the mass 8 is in the form of mass having poor drainage capability, e.g. clay or fill mass containing earth. In this case it is desirable to arrange the filtration canvas externally of the other side of the sheet,  
25           whereby water being filtrated through the canvas escapes via the channels 4.

- The filtrating canvas 5 prevents the channels 4 from being blocked by the mass 8. In this connection the crater-like portion 3 of the knob 2 will effect further  
30           support of the canvas 5 and prevent it from being pressed into the recess 2A.

- In Fig. 6 there is shown a protective sheet 1 intended as moist bar for a floor 9, e.g. a floor made from plates of wood chippings. Sheet 1 is arranged on a  
35           cast layer 10 on the ground (not shown). The channels 4

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will in this case contribute to a certain ventilation  
between the floor plate 9 and the protective sheet 1.  
Further, the crater-like portion 3 of the knob 2 upon  
heavy point loads on the floor 9 contribute to the knob  
5 better withstanding such deforming forces.

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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A protective sheet, in particular for a foundation wall or a floor on the ground, comprising a substantially planar sheet of suitable, relatively stiff plastic material, one side of the sheet having a large number of spaced protrusions constituted by knobs provided by forming, the other side of the sheet thereby obtaining a corresponding number of recesses provided by said forming, characterized in that the knobs have a reversely directed centrally disposed crater-like portion of truncated conical form, the widest end of which is integral with the upper portion of the knob and the narrowest end of which is substantially flush with the other side of the sheet.

2. A protective sheet as claimed in claim 1 including open channels, there is provided through forming in such a manner that on the one side of the sheet there appears a corresponding rib with a height less than the height of the knobs, characterized in that each of the open channels extends between and has respective ends opening into the recesses of adjacent knobs.

FETHERSTONHAUGH & CO.  
P.O. Box 248  
Montreal AMF  
Dorval, Quebec, Canada  
H4Y 1A8

Patent Agents for Applicant



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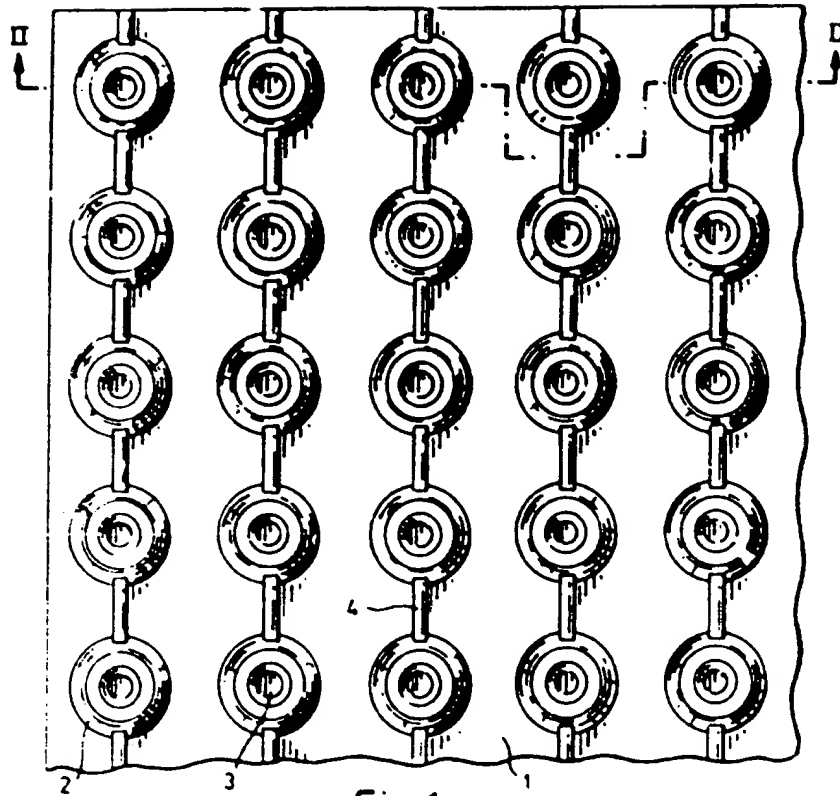


Fig. 1.

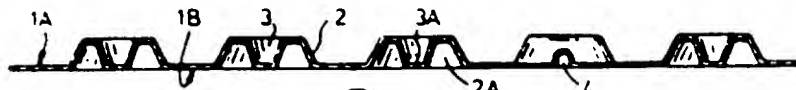


Fig. 2.



Fig. 3.

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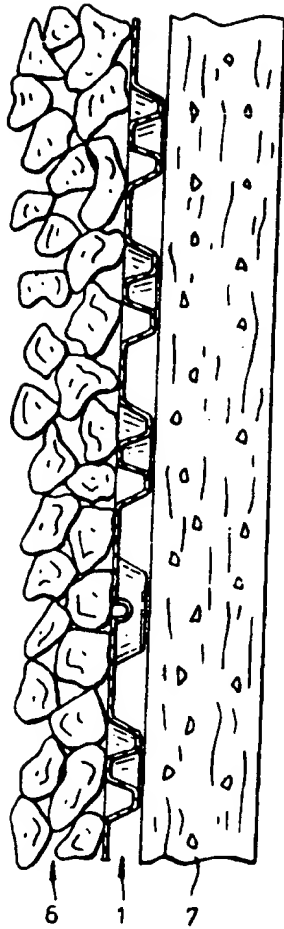


Fig. 4.

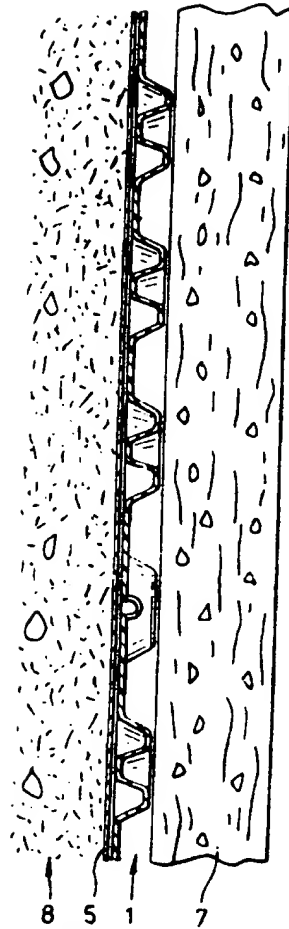


Fig. 5.

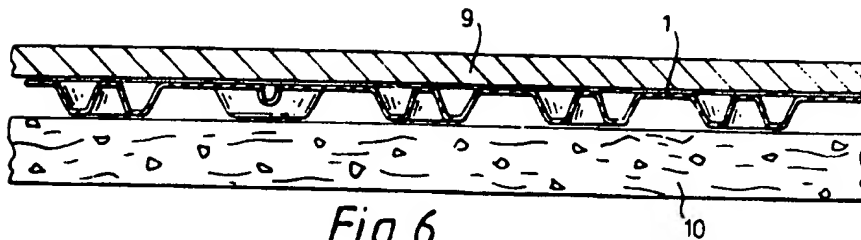


Fig. 6.

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